

PART NUMBER: VHB200W

DESCRIPTION: half brick dc-dc converter

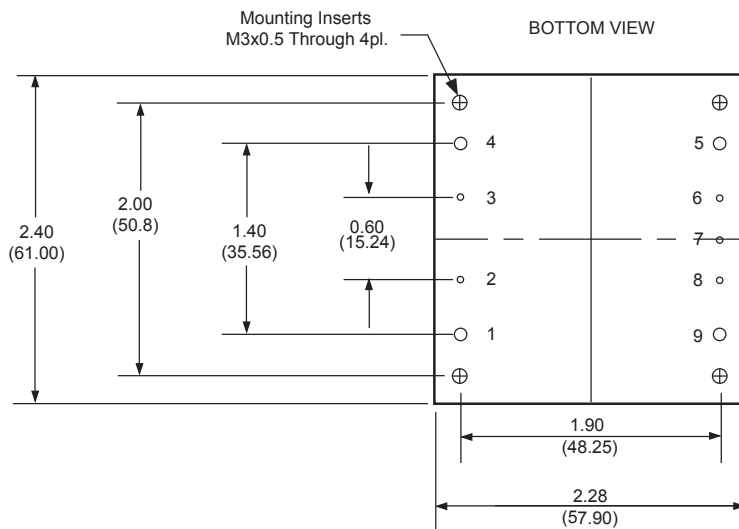
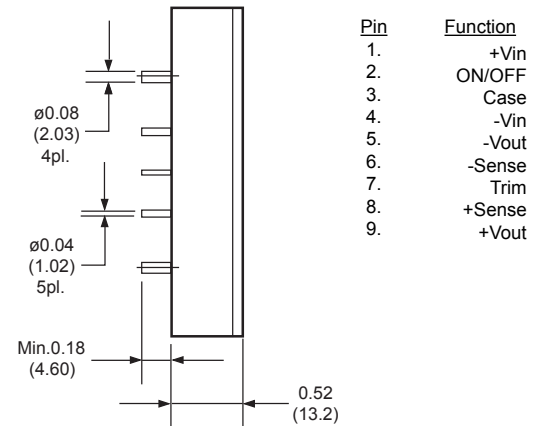
features

- 132 - 200 W isolated output
- efficiency to 89%
- fixed switching frequency
- monotonic start-up
- under-voltage, over-temp., over-voltage, over-current protected
- remote on/off
- industry standard half-brick package
- fully isolated 1500 V dc



| MODEL | input voltage (V dc) | output voltage (V dc) | output current | | input current | | efficiency % |
|------------------|-------------------------|--------------------------|----------------|--------|---------------|---------|-----------------|
| | | | min. | max. | min. | max. | |
| VHB200W-Q48-S3R3 | 18~75 | 3.3 | 0 mA | 40 A | 80 mA | 3125 mA | 88 |
| VHB200W-Q48-S5 | 18~75 | 5 | 0 mA | 40 A | 80 mA | 4682 mA | 89 |
| VHB200W-Q48-S12 | 18~75 | 12 | 0 mA | 16.7 A | 60 mA | 4744 mA | 87 |
| VHB200W-Q48-S15 | 18~75 | 15 | 0 mA | 13.3 A | 60 mA | 4723 mA | 87 |
| VHB200W-Q48-S24 | 18~75 | 24 | 0 mA | 8.3 A | 60 mA | 4716 mA | 87 |

note: 1. nominal input voltage is 48 V dc

 All Dimensions In Inches(mm)
 Tolerance Inches: x.xx= ±0.02, x.xxx= ±0.010
 Millimeters: x.x= ±0.5, x.xx= ±0.25

Pin Connection


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INPUT

| parameter | conditions/description | min | nom | max | units |
|--|------------------------|-----|---------|-----|-------|
| input voltage | | 18 | 48 | 75 | V dc |
| under voltage lockout | 48 Vin power up | | 17 | | |
| | 48 Vin power down | | 16 | | |
| positive logic remote On/Off ⁴ and ⁵ | | | | | |
| input filter | | | PI Type | | |

OUTPUT

| parameter | conditions/description | min | nom | max | units |
|--|---------------------------------------|-----|------------|-------|--------|
| voltage accuracy | | | | ±1.5% | |
| transient response | 25% Step Load Change | | | 500 | µ/sec. |
| External Trim Adj. Range | | | ±10% | | |
| Ripple & Noise | 20MHz BW 3.3V & 5V, 100mV pk-pk, max. | | | 40 | mV RMS |
| | 20MHz BW 12V & 15V, 150mV pk-pk, max. | | | 60 | mV RMS |
| | 20MHz BW 24V, 240mV pk-pk, max. | | | 100 | mV RMS |
| Temperature Coefficient | | | ±0.03 | | %/°C |
| Short Circuit Protection | | | Continuous | | |
| Line Regulation ¹ | | | | ±0.2 | % |
| Load Regulation ² | | | | ±0.2 | % |
| Over Voltage Protection Trip Range, % Vo nom | | 115 | | 140 | % |
| Current Limit | Nominal Output | 110 | | 150 | % |

GENERAL SPECIFICATIONS

| parameter | conditions/description | min | nom | max | units |
|-----------------------------|---|------|-----------------|-----|-------|
| efficiency | see table | | | | |
| isolation voltage | input/output | 1500 | | | V dc |
| | input/case | 1500 | | | V dc |
| | output/case | 1500 | | | V dc |
| isolation resistance | | | 10 ⁷ | | Ω |
| switching frequency | | | 250 | | KHz |
| operating case temperature | | -40 | | 100 | °C |
| storage temperature | | -55 | | 105 | °C |
| thermal shutdown, case temp | | | 110 | | °C |
| dimensions | 2.28 x 2.4 x 0.25 inches (57.9 x 61.0 x 13.2mm) | | | | |
| case material | aluminum baseplate with plastic case | | | | |

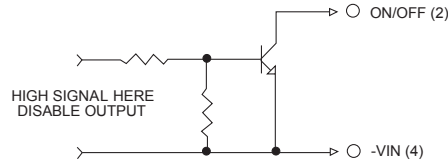
- notes:
1. measured from high line to low line
 2. measured from full load to zero load
 3. output ripple and noise measured with 10 µF tantalum and 1 µF ceramic capacitor across output
 4. logic compatibility: open collector ref to-input
 module ON: >5.5 V dc to 75 V dc or open circuit
 module OFF: <1.2 V dc
 5. suffix "N" to the model number with negative logic remote ON/OFF
 module ON: <1.2 V dc
 module OFF: >5.5 V dc to 75 V dc or open circuit
 6. trim-up: connect a resistor between the trim pin and +sense
 trim-down: connect a resistor between the trim pin and -sense



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REMOTE ON/OFF CONTROL



EXTERNAL OUTPUT TRIMMING

